

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Issue Date	:	October 12, 2010
Applicants/Patentees	:	Godo SAKAMOTO, et al.
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Filed	:	June 12, 2006
For:	:	HIGH STRENGTH POLYETHYLENE FIBER
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Group Art Unit	:	1782
Examiner	:	Jill M. GRAY
Docket No.	:	10404/21

**Attn: Certificate of Corrections Branch**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REQUEST FOR CERTIFICATE OF CORRECTION UNDER 37 C.F.R. §1.323**

Sir:

Applicants request that the patent be corrected for an error made by the applicants as shown in the attached Certificate of Correction. The error is of a clerical nature, typographical nature or minor character, the correction of which would not constitute new matter and would not require reexamination.

Applicants also attach a marked-up copy of the U.S. patent cover page, showing the underlying International application filing date to be corrected from “Mar. 12, 2004” to “Dec. 3, 2001.” Applicant further attach a Bibliographic data sheet from the WIPO website, showing the correct International filing date for the underlying International application, PCT/JP2004/018004, to be “03.12.2004.”

The Commissioner is hereby authorized to charge payment of the 37 C.F.R. §1.20(a) Certificate of Correction fee of \$100.00 to the deposit account of Kenyon & Kenyon LLP, **Deposit Account No. 11-0600**. The Commissioner is also authorized to charge any additional fees or credit any overpayment in connection with this paper to Deposit Account No. 11-0600.

Respectfully submitted,  
KENYON & KENYON LLP

Dated: November 11, 2010

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

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PATENT NO. : 7,811,673

APPLICATION NO.: 10/582,624

ISSUE DATE : October 12, 2010

INVENTOR(S) : Godo SAKAMOTO, et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Page 1, column 1 under Item (22) PCT FILED, the International Filing Date of "Mar. 12, 2004" should be changed to --Dec. 3, 2004--.

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US007811673B2

(12) **United States Patent**  
**Sakamoto et al.**(10) **Patent No.:** **US 7,811,673 B2**(45) **Date of Patent:** **Oct. 12, 2010**(54) **HIGH STRENGTH POLYETHYLENE FIBER**(75) Inventors: **Godo Sakamoto**, Otsu (JP); **Tooru Kitagawa**, Otsu (JP); **Yasuo Ohta**, Otsu (JP); **Yasunori Fukushima**, Otsu (JP); **Hiroki Murase**, Otsu (JP)(73) Assignee: **Toyo Boseki Kabushiki Kaisha**, Osaka-Shi (JP)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 478 days.

(21) Appl. No.: **10/582,624**(22) PCT Filed: **Mar. 12, 2004** Dec. 3, 2004(86) PCT No.: **PCT/JP2004/018004**

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(2), (4) Date: **Jun. 12, 2006**(87) PCT Pub. No.: **WO2005/056892**PCT Pub. Date: **Jun. 23, 2005**(65) **Prior Publication Data**

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(51) **Int. Cl.**  
**D01F 6/00** (2006.01)(52) **U.S. Cl.** ..... **428/634; 428/394**(58) **Field of Classification Search** ..... None  
See application file for complete search history.(56) **References Cited****U.S. PATENT DOCUMENTS**

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(57) **ABSTRACT**

To provide a novel high strength polyethylene multifilament which consists of a plurality of filaments having high strengths and uniform internal structures, and showing a narrow variation in the strengths of the monofilaments, and which has been difficult to be provided by the conventional gel spinning method.

A high strength polyethylene multifilament consisting of a plurality of filaments which are characterized in that the crystal size of monoclinic crystal is 9 nm or less; the stress Raman shift factor is  $-5.0 \text{ cm}^{-1}/(\text{cN/dTex})$  or more; the average strength is 20 CN/dTex or higher; the knot strength retention of each monofilament is 40% or higher; CV indicating a variation in the strengths of the monofilaments is 25% or lower; the elongation at break is from 2.5% inclusive to 6.0% inclusive; the fineness of each filament is 10 dTex or less; and the melting point of the filaments is 145° C. or higher.

**7 Claims, No Drawings**



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Search result: 1 of 1

## (WO/2005/056892) HIGH STRENGTH POLYETHYLENE FIBER

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[National Phase](#)
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Latest bibliographic data on file with the International Bureau

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2004-003564 09.01.2004 JP  
2004-092305 26.03.2004 JP  
2004-201430 08.07.2004 JP

Title: (EN) HIGH STRENGTH POLYETHYLENE FIBER  
(JA) 高強度ポリエチレン繊維

Abstract: (EN) [PROBLEMS] To provide a novel polyethylene fiber which exhibits high strength and has a uniform internal structure, wherein a variation in strength of filaments constituting a fiber is narrow, and which has been difficult to be provided by the use of a conventional method such as the gel spinning method. [MEANS FOR SOLVING PROBLEMS] A high strength polyethylene multifilament, characterized in that it exhibits a size of a monoclinic-derived crystal of 9 nm or less, a stress Raman shift factor of  $-5.0 \text{ cm}^{-1}/(\text{cN/dTex})$  or more, an average strength of 20 cN/dTex or more, a retention of the knot strength of a filament constituting it of 40% or more, a CV indicating the variation in the single yarn strengths of filaments of 25 % or less, an elongation at break of 2.5 to 6.0 %, a single yarn fineness of 10 dTex or less, a melting point of the fiber of 145°C or higher.  
(JA) 【課題】従来のゲル紡糸法のような手法では得ることが困難であった高強度であり繊維の内部構造が均一かつ繊維を構成するフィラメント強度のバラツキの少ない新規なポリエチレン繊維を提供することを課題とした。【解決手段】モノクリニック由来の結晶サイズが9 nm以下、応力ラマンシフトファクターが $-5.0 \text{ cm}^{-1}/(\text{cN/dTex})$ 以上、平均強度が20 cN/dTex以上、マルチフィラメントを構成するフィラメントの結節強度の保持率が40 %以上、フィラメントの単糸強度のばらつきを示すCVが25 %以下、破断伸度が2.5 %以上6.0 %以下、単糸繊維が10 dTex以下、繊維の融点が145 °C以上であることを特徴とする高強度ポリエチレンマルチフィラメント。

Designated States: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL,

PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

African Regional Intellectual Property Org. (ARIPO) (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW)

Eurasian Patent Organization (EAPO) (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM)

European Patent Office (EPO) (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR)

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